Geometry honors problem sets

Area of regular polygons

***For 1-12, complete the tables for the regular polygons. In these tables, P represents the perimeter and A represents the area.***





(1-4) (5-8)

|  |  |  |  |
| --- | --- | --- | --- |
| r | a | p | A |
| 6 | ? | ? | ? |
| ? | 4 | ? | ? |
| ? | ? | 12 | ? |
| ? | ? |  | ? |

|  |  |  |
| --- | --- | --- |
| r | a | A |
|  | ? | ? |
| ? | 5 | ? |
| ? | ? | 49 |
| ? |  | ? |



|  |  |  |  |
| --- | --- | --- | --- |
| r | a | p | A |
| 4 | ? | ? | ? |
| ? |  | ? | ? |
| ? | 6 | ? | ? |
| ? | ? |  | ? |

(9-12)

***Find the area of each regular polygon.***

13. A square with radius 8k

14. A hexagon with apothem 4

15. A pentagon with radius 10 (to nearest tenth)

16. a decagon inscribed in a circle with radius of 1 (4 significant digits)